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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,853	02/07/2001	Hiroyuki Fujisaki	202866US0	3374
22850	7590	02/05/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			MEDINA SANABRIA, MARIBEL	
			ART UNIT	PAPER NUMBER
			1754	

DATE MAILED: 02/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/777,853

Applicant(s)

FUJISAKI ET AL.

Examiner

Maribel Medina

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-11 and 13-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11 and 13-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

#### **Continued Examination Under 37 CFR 1.114**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114.

Applicant's submission filed on 9/23/03 has been entered.

#### **Claim Rejections - 35 USC § 102**

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-5, 18, 20, 22 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,403,048 (Kobayashi et al).

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The applied reference has a common assignee and inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1-2, Kobayashi et al disclose a combustion catalyst comprising a first catalyst comprising alumina containing at least one the elements of the platinum group, and a second catalyst comprising a mixture of zeolite with a metal oxide, wherein the metal oxide is loaded with at least one of the elements of the platinum group; wherein the alumina of the first catalyst has a pore size distribution such that where "a" represents a pore radius in Å at the maximum of the pore radius distribution curve, the accumulated pore volume of pores having a radii in the range of (a-25) Å to (a+25) Å is at least 65% of the total volume of all the pores, said alumina containing less than 1% by weight of rare elements (See col. 2, line 50 to col. 3, line 20; col.9, lines 60-67; and col. 11, lines 15-30).

The limitation of claim 1, that reads "said first catalyst and said second catalyst being arranged in a manner such that organic compound(s) to be removed is/are contacted first with the first catalyst and then with the second catalyst" has been noted but no considered as being directed to a method limitation.

Regarding claim 3, Kobayashi et al disclose that the ratio of the metal oxide containing platinum to the zeolite ranges from 1:20 to 20:1 by weight (See col. 4, lines 55-60).

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Regarding claims 4 and 20, Kobayashi et al disclose that the zeolite is ion-exchanged with cations from groups IA and/or IIA such as calcium (See col. 3, lines 45-53).

Regarding claim 5, Kobayashi et al disclose that the metal oxide is alumina, having a pore size distribution such that where "a" represents a pore radius in Å at the maximum of the pore radius distribution curve, the accumulated pore volume of pores having a radii in the range of (a-25) Å to (a+25) Å is at least 65% of the total volume of all the pores, said alumina containing less than 1% by weight of rare elements (See col. 3, lines 20-67).

Regarding claim 18, Kobayashi et al disclose that the zeolite has a  $\text{SiO}_2/\text{Al}_2\text{O}_3$  of 10 or higher (See col. 3, lines 37-40).

Regarding claim 22, Kobayashi et al disclose that the alumina and metal oxide contain platinum.

The limitation of claim 24, it has been noted but not considered as being directed to a method limitation

No difference is seen between the instantly claimed invention and Kobayashi et al disclosure

**Claim Rejections - 35 USC § 103**

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7-11, 13-17, 19, 21, 23, and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al in view of US Patent no. 5,125,231 (Patil et al).

Kobayashi et al disclose a process for removing organic compounds by catalytic combustion comprising the step of contacting the organic compounds with a combustion catalyst comprising a first catalyst comprising alumina containing at least one the elements of the platinum group, and a second catalyst comprising a mixture of zeolite with a metal oxide, wherein the metal oxide is loaded with at least one of the elements of the platinum group; wherein the alumina of the first catalyst has a pore size distribution such that where “a” represents a pore radius in Å at the maximum of the pore radius distribution curve, the accumulated pore volume of pores having a radii in the range of (a-25) Å to (a+25) Å is at least 65% of the total volume of all the pores, said alumina containing less than 1% by weight of rare elements (See col. 2, line 50 to col. 3, line 20; col.9, lines 60-67 and col. 11, lines 15-30).

Kobayashi et al disclose that the organic compound(s) is/are contacted first with the second catalyst of the combustion catalyst and then with the first catalyst of the combustion catalyst (See col. 11, lines 15-30), however fail to disclose that the organic compound(s) is/are contacted first with the first catalyst of the combustion catalyst and then with the second catalyst of the combustion catalyst.

Patil et al is relied upon to teach a process for removing organic compounds wherein the organic compounds are contacted with a catalyst comprising a first catalyst comprising alumina and a platinum group metal and then with a second catalyst comprising a zeolite, a metal oxide and a platinum group metal (See col. 2, lines 50-66; and col. 4, line 51-col. 7, line 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have reversed the order of contact of the organic compounds in the Kobayashi et al process, as taught by Patil et al, since Patil et al disclose that this configuration and order of

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contacting helps achieves better yield of reduction of the organic compounds (See col. 2, lines 30-51).

Regarding claim 9, Kobayashi et al disclose that the ratio of the metal oxide containing platinum to the zeolite ranges from 1:20 to 20:1 by weight (See col. 4, lines 55-60).

Regarding claims 10 and 21, Kobayashi et al disclose that the zeolite is ion-exchanged with cations from groups IA and/or IIA such as calcium (See col. 3, lines 45-53).

Regarding claim 11, Kobayashi et al disclose that the metal oxide is alumina, having a pore size distribution such that where "a" represents a pore radius in Å at the maximum of the pore radius distribution curve, the accumulated pore volume of pores having a radii in the range of (a-25) Å to (a+25) Å is at least 65% of the total volume of all the pores, said alumina containing less than 1% by weight of rare elements (See col. 3, lines 20-67).

Regarding claim 19, Kobayashi et al disclose that the zeolite has a  $\text{SiO}_2/\text{Al}_2\text{O}_3$  of 10 or higher (See col. 3, lines 37-40).

Regarding claims 13-14, 16-17 and 25, Kobayashi et al disclose, "The organic compounds which may be removed or destroyed by the invention are carbon compounds which may contain hydrogen, halogen atoms, oxygen etc. in the molecule. As non-limiting examples, there may be mentioned methane, ethane, propane, ethylene, propylene, butadiene, benzene, xylenes, toluenes, chloroform, dichloromethane, trichloromethane, carbon tetrachloride, methylbromide, 1,2-dichloroethane, vinyl chloride, monochlorobenzene, chlorofluorocarbons, PCBs, dioxins, etc. Amongst halogen-containing organic compounds and/or organic compounds showing a vapor pressure of 0.01 kPa or higher at a temperature of 293.15° K, hydrocarbons

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containing two carbon atoms and/or C<sub>2</sub> chlorinated hydrocarbons may be effectively treated in accordance with the invention" (See col. 6, lines 17-41)

**Conclusion**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maribel Medina whose telephone number is (571) 272-1355. The examiner can normally be reached on Monday through Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Maribel Medina  
Examiner  
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